



DEPARTMENT OF THE AIR FORCE
59TH MEDICAL WING (AETC)
JOINT BASE SAN ANTONIO - LACKLAND TEXAS

15 NOV 2016

MEMORANDUM FOR DOR

ATTN: CAPT ANDREW S. MURTHA

FROM: 59 MDW/SGVU

SUBJECT: Professional Presentation Approval

1. Your paper, entitled **Total. Knee Arthroplasty for Posttraumatic Osteoarthritis in Military Personnel Under Age 50** presented at **58th Annual Meeting of the Society of Military Orthopaedic Surgeons, CA. 12-16 Dec** in accordance with MDWI 41-108, has been approved and assigned local file #**16385**.
2. Pertinent biographic information (name of author(s), title, etc.) has been entered into our computer file. Please advise us (by phone or mail) that your presentation was given. At that time, we will need the date (month, day and year) along with the location of your presentation. It is important to update this information so that we can provide quality support for you, your department, and the Medical Center commander. This information is used to document the scholarly activities of our professional staff and students, which is an essential component of Wilford Hall Ambulatory Surgical Center (WHASC) internship and residency programs.
3. Please know that if you are a Graduate Health Sciences Education student and your department has told you they cannot fund your publication, the 59th Clinical Research Division may pay for your basic journal publishing charges (to include costs for tables and black and white photos). We cannot pay for reprints. If you are 59 MDW staff member, we can forward your request for funds to the designated wing POC.
4. Congratulations, and thank you for your efforts and time. Your contributions are vital to the medical mission. We look forward to assisting you in your future publication/presentation efforts.

LINDA STEEL-GOODWIN, Col, USAF, BSC
Director, Clinical Investigations & Research Support

PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS

1. TO: CLINICAL RESEARCH 2. FROM: (Author's Name, Rank, Grade, Office Symbol)
 Andrew S. Murtha, Capt, O3, DOR 3. GME/GHSE STUDENT: ☒ YES ☐ NO 4. PROTOCOL NUMBER:

5. PROTOCOL TITLE: (NOTE: For each new release of medical research or technical information as a publication/presentation, a new 59 MDW Form 3039 must be submitted for review and approval.)

6. TITLE OF MATERIAL TO BE PUBLISHED OR PRESENTED:
 Total Knee Arthroplasty for Posttraumatic Osteoarthritis in Military Personnel Under Age 50

7. FUNDING RECEIVED FOR THIS STUDY? ☐ YES ☒ NO FUNDING SOURCE:

8. DO YOU NEED FUNDING SUPPORT FOR PUBLICATION PURPOSES: ☐ YES ☒ NO

9. IS THIS MATERIAL CLASSIFIED? ☐ YES ☒ NO

10. IS THIS MATERIAL SUBJECT TO ANY LEGAL RESTRICTIONS FOR PUBLICATION OR PRESENTATION THROUGH A COLLABORATIVE RESEARCH AND DEVELOPMENT AGREEMENT (CRADA), MATERIAL TRANSFER AGREEMENT (MTA), INTELLECTUAL PROPERTY RIGHTS AGREEMENT ETC.? ☐ YES ☒ NO NOTE: If the answer is YES then attach a copy of the Agreement to the Publications/Presentations Request Form.

11. MATERIAL IS FOR: ☒ DOMESTIC RELEASE ☐ FOREIGN RELEASE
 CHECK APPROPRIATE BOX OR BOXES FOR APPROVAL WITH THIS REQUEST. ATTACH COPY OF MATERIAL TO BE PUBLISHED/PRESENTED.

☐ 11a. PUBLICATION/JOURNAL (List intended publication/journal.)

☐ 11b. PUBLISHED ABSTRACT (List intended journal.)

☐ 11c. POSTER (To be demonstrated at meeting: name of meeting, city, state, and date of meeting.)

☒ 11d. PLATFORM PRESENTATION (At civilian institutions: name of meeting, state, and date of meeting.)
 58th Annual Meeting of the Society of Military Orthopaedic Surgeons, CA, 12-16 Dec

☐ 11e. OTHER (Describe: name of meeting, city, state, and date of meeting.)

12. HAVE YOUR ATTACHED RESEARCH/TECHNICAL MATERIALS BEEN PREVIOUSLY APPROVED TO BE PUBLISHED/PRESENTED?
☐ YES ☒ NO ASSIGNED FILE # _____ DATE _____

13. EXPECTED DATE WHEN YOU WILL NEED THE CRD TO SUBMIT YOUR CLEARED PRESENTATION/PUBLICATION TO DTIC
 NOTE: All publications/presentations are required to be placed in the Defense Technical Information Center (DTIC).

DATE
 December 01, 2016

14. 59 MDW PRIMARY POINT OF CONTACT (Last Name, First Name, M.I., email)
 Murtha, Andrew, S., andrew.s.murtha2.mil@mail.mil 15. DUTY PHONE/PAGER NUMBER
 210-916-3410

16. AUTHORSHIP AND CO-AUTHOR(S) List in the order they will appear in the manuscript.

LAST NAME, FIRST NAME AND M.I.	GRADE/RANK	SQUADRON/GROUP/OFFICE SYMBOL	INSTITUTION (If not 59 MDW)
a. Primary/Corresponding Author Andrew S. Murtha	Capt/O3	959 CSPS	59 MDW
b. Anthony E. Johnson	COL/O6		
c. Joseph A. Buckwalter	Civilian		University of Iowa
d. Jessica C. Rivera	MAJ/O4		
e.			

17. IS A 502 ISG/JAC ETHICS REVIEW REQUIRED (JER DOD 5500 07-R)? ☐ YES ☒ NO

I CERTIFY ANY HUMAN OR ANIMAL RESEARCH RELATED STUDIES WERE APPROVED AND PERFORMED IN STRICT ACCORDANCE WITH 32 CFR 219, AFMAN 40-401 JP, AND 59 MDW 41-108. I HAVE READ THE FINAL VERSION OF THE ATTACHED MATERIAL AND CERTIFY THAT IT IS AN ACCURATE MANUSCRIPT FOR PUBLICATION AND/OR PRESENTATION.

18. AUTHOR'S PRINTED NAME, RANK, GRADE
 Andrew S. Murtha, Capt, O3

19. AUTHOR'S SIGNATURE

20. DATE
 September 22, 2016

21. APPROVING AUTHORITY'S PRINTED NAME, RANK, TITLE

22. APPROVING AUTHORITY'S SIGNATURE

23. DATE
 2016/10/31

PATRICK M. OSBORNE, Lt Col, USAF

PROCESSING OF PROFESSIONAL MEDICAL RESEARCH/TECHNICAL PUBLICATIONS/PRESENTATIONS			
1st ENDORSEMENT (59 MDW/SGVU Use Only)			
TO: Clinical Research Division 59 MDW/CRD Contact 292-7141 for email instructions.	24. DATE RECEIVED 11/3/2016	25. ASSIGNED PROCESSING REQUEST FILE NUMBER 16385	
26. DATE REVIEWED 10 Nov 2016		27. DATE FORWARDED TO 502 ISG/JAC	
28. AUTHOR CONTACTED FOR RECOMMENDED OR NECESSARY CHANGES: <input type="checkbox"/> NO <input type="checkbox"/> YES If yes, give date. <input checked="" type="checkbox"/> N/A			
29. COMMENTS <input checked="" type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED IRB approved retrospective study. BAMC IRB number C2013,134d/391024			
30. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Kupferer/GS13/Hum Res Subj Prot Exp		31. REVIEWER SIGNATURE KUPFERER.KEVI <div style="font-size: small; margin-top: 2px;"> Digitally signed by KUPFERER.KEVIN R.1086667270 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USAF, cn=KUPFERER.KEVIN R.1086667270 </div>	32. DATE 10 Nov 2016
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42. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER Kevin Iinuma, SSgt/E-5, 59 MDW Public Affairs		43. REVIEWER SIGNATURE IINUMA.KEVIN.MITSUGU.129 6227613 <div style="font-size: x-small; margin-top: 2px;"> Digitally signed by IINUMA.KEVIN.MITSUGU.1296227613 DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USAF, ou=IINUMA.KEVIN.MITSUGU.1296227613 Date: 2016.11.14 15:15:08 -06'00' </div>	44. DATE November 14, 2016
4th ENDORSEMENT (59 MDW/SGVU Use Only)			
45. DATE RECEIVED		46. SENIOR AUTHOR NOTIFIED BY PHONE OF APPROVAL OR DISAPPROVAL <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> COULD NOT BE REACHED <input type="checkbox"/> LEFT MESSAGE	
47. COMMENTS <input type="checkbox"/> APPROVED <input type="checkbox"/> DISAPPROVED			
48. PRINTED NAME, RANK/GRADE, TITLE OF REVIEWER		49. REVIEWER SIGNATURE	50. DATE

Total Knee Arthroplasty for Posttraumatic Osteoarthritis in Military Personnel Under Age 50

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Abstract:

United States military personnel frequently suffer knee injuries. The resulting progressive post-traumatic osteoarthritis (PTOA) causes significant disability in these young high-demand patients for which total knee arthroplasty (TKA) is the only effective treatment of their pain and impairment. Yet the use of this option for treatment of PTOA has not been studied. This retrospective review identified 74 knees in 64 U.S. military personnel who underwent TKA at ≤ 50 years-of-age during an eight year period at a tertiary-care, academic, military medical center. Fifty-five knees (74.3%) experienced one or more prior ligamentous, meniscal, or chondral injuries prior to arthroplasty. Only one subject had a history of osteochondral intra-articular fracture. The average at injury was 29.2 years ($SD \pm 9.4$) with an average age at arthroplasty of 44.3 years (± 5.3). The most common injury was anterior cruciate ligament rupture ($n=19$) with a mean time to TKA of 23.1 years (± 23.5) and 18.8 years (± 9.5) when concomitant meniscal pathology was noted. Nineteen patients were noted to have radiographic and symptomatic end-stage osteoarthritis without a specified etiology at 44.2 years (± 3.6) and underwent subsequent TKA. This is the first study to evaluate treatment of end-stage PT OA in young people treated with TKA, finding that the incidence of PTOA as an indication for arthroplasty is significantly higher than among civilians. In this otherwise healthy, high-demand patient population, the rate of OA progression following knee injury is accelerated and the long term implications can be career and life-altering.

All authors (ASM, AEJ, JAB, JCR) meet criteria for authorship based on contributions to the design and conduct of this research, manuscript development/revision, and approval of the final submitted version.

The opinions or assertions contained herein are the private views of the authors and are not be construed as official or as reflecting the views of the Department of the Army or the Department of Defense.